New York State Department of Transportation
Yellow Flag NB2358W006

By: Alex Abreu
Flag Date: April 24, 2023

Superseding Information:
No Flags Superseded

Structure Information

BIN: **1065318**
Feature Carried: 278I278IX2M23027
Feature Crossed: 6TH AVENUE
Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY
County: KINGS
Political Unit: City of NEW YORK
Approximate Year Built: 1962

Posted Load Matches Inventory : Yes
Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E.
Date: April 25, 2023 3:00:00 PM

Of: NYSDOT Region 11

Signature Information

Signature: Alex Abreu, P.E. 099761-1
Date: May 17, 2023

Reviewed By: Robert Kemp
Date: May 17, 2023

Attachments: 10

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 29			
	107 - Steel Open Girder/Beam	1867	ft

Flagged Condition Description

This Yellow Flag No. NB2358W006 is NEW.

Location: Span 29, Girder G17 at Pier 29 above the right lane of 65th Street EB roadway between 4th and 5th Avenue.

Description:
The end of Girder G17 on Span 29 Side of Pier 29 exhibits 3" long vertical crack in the fillet of the left connection angle starting at the bottom of the connection angle. (Photos #5 and #6).

In addition, there is a previous repair channel at the lower web, above the bottom flange. Full height section loss in the shear web area of the girder above the repair channel is 1/16" (less than 10%), Localized section loss in the lower web of the girder, above the bottom flange and adjacent to the repair channel is 3/16”-1/4” deep section loss (32% avg.) for 20” L x 2” H at the left face and up to 1/16” deep section loss (9%) for 20” L x 2” H at the right face for an approximately 41% localized section loss over a 20" L x 2" H area.(refer to Yellow Flag Condition sketch #2 for more details).

This is a newly flagged condition.

Notes:
1. Adjacent Girders G18 and G16 exhibit no significant defects.

2. A single lane closure in the right lane on EB roadway and 30ft bucket truck are required to access this location.

3. Dye Penetrant test was performed to establish the limits of the crack.

4.This location was inspected during the 2022 SILO (no crack was present), with the following description as per the mini report:
This girder location has previously installed steel repair channel at the lower web above the bottom flange which exhibits 1/8”-3/16” deep section loss in the lower web area for 24” L (full channel length) x 3” H and 1/16” deep section loss in the upper web area for 12” L x 1” H at the left face and 1/16” deep section loss for 24” L (full channel length) x 1” H in the lower web area and up to 1/8” deep section loss for the full channel web height (19” H) x 5”-12” W along the connection angle at the right face. Also, the steel repair channel at the right face exhibits three corrosion holes with two ¼” diameter holes and one ½” diameter hole within section loss area near connection angle. The girder web area at the begin side of the steel repair channel exhibits 3/16”-1/4” deep section loss for 20” L x 2” H at the left face and up to 1/16” deep section loss for 20” L x 2” H at the right face in the lower web above the bottom flange with one pin hole approximately 8” from begin side of repair channel within section loss area. The girder web above the steel repair channel exhibits section loss for up to 1/8” deep for 24” L x up to 3” H at the left face and 1/16” deep for 24” L x 2” H at the right face. In addition, the steel repair channel exhibits pack rust up to 1” thick between the channel and girder web for the full height of channel at the end side along the connection angle. The remaining girder web area exhibits 1/16” deep section loss for full web height for 4” wide along connection angle at the left face with 6” H x 10” W area at top cope with 1/8” section loss at both faces of the girder. Also, the upper web area at the top cope exhibits three corrosion holes with one ¼” diameter hole, one 1” diameter hole, and one 3” L x 1” H hole within section loss area. The bottom flange exhibits up to 1/8” deep section loss at the edge of the flange for 18” L x 3” W at both sides. (Photos #7 thru #10) The first vertical web stiffener (counting from pier 29) exhibits 3” L x 1” H corrosion hole at the bottom of the stiffener at the left face.

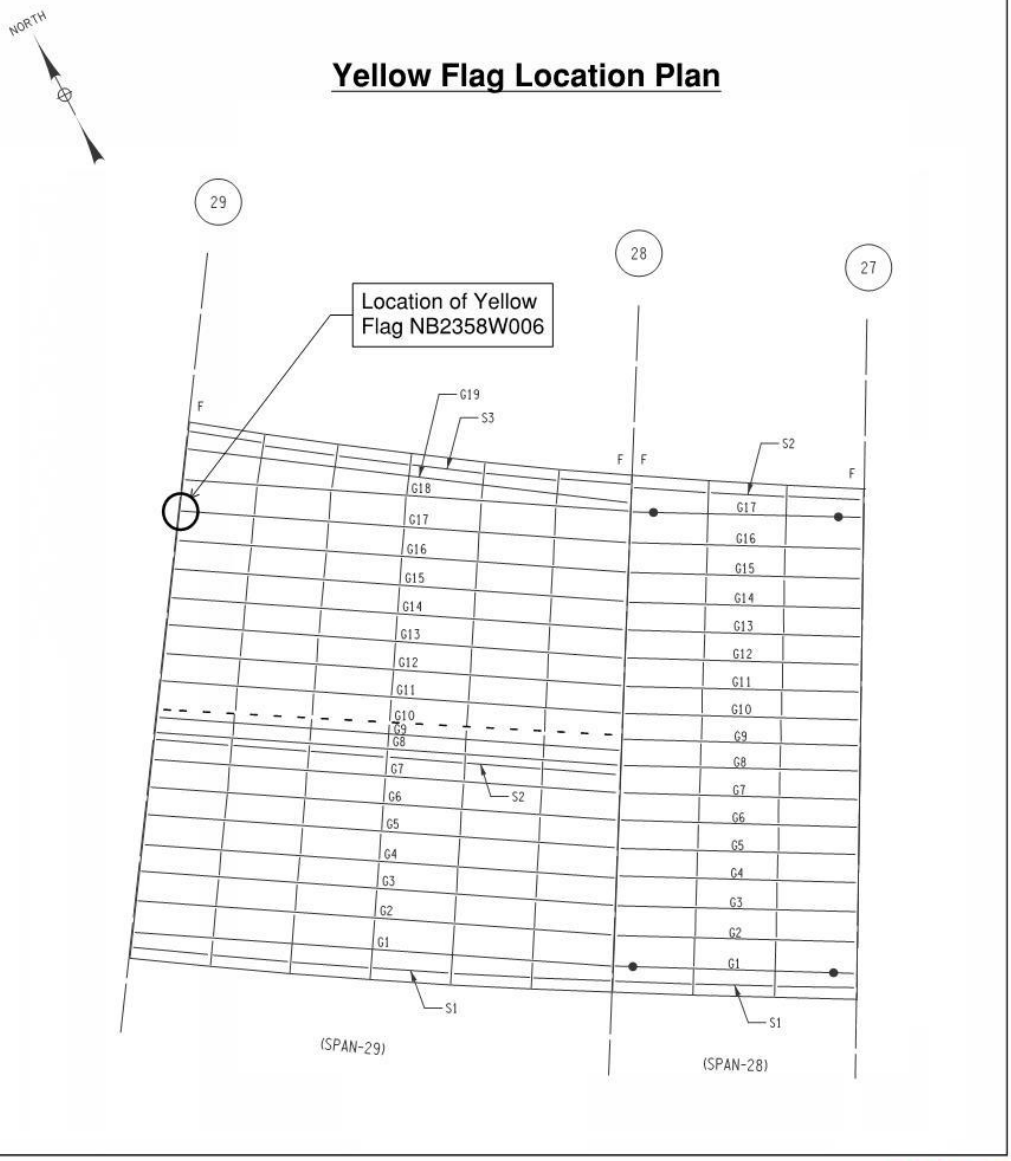
Flag Photographs

Photo Number: **1** Photo Filename: **23_Flag Location Plan.jpg**

Gowanus Expressway
2023 Biennial Inspection - Field Sketch

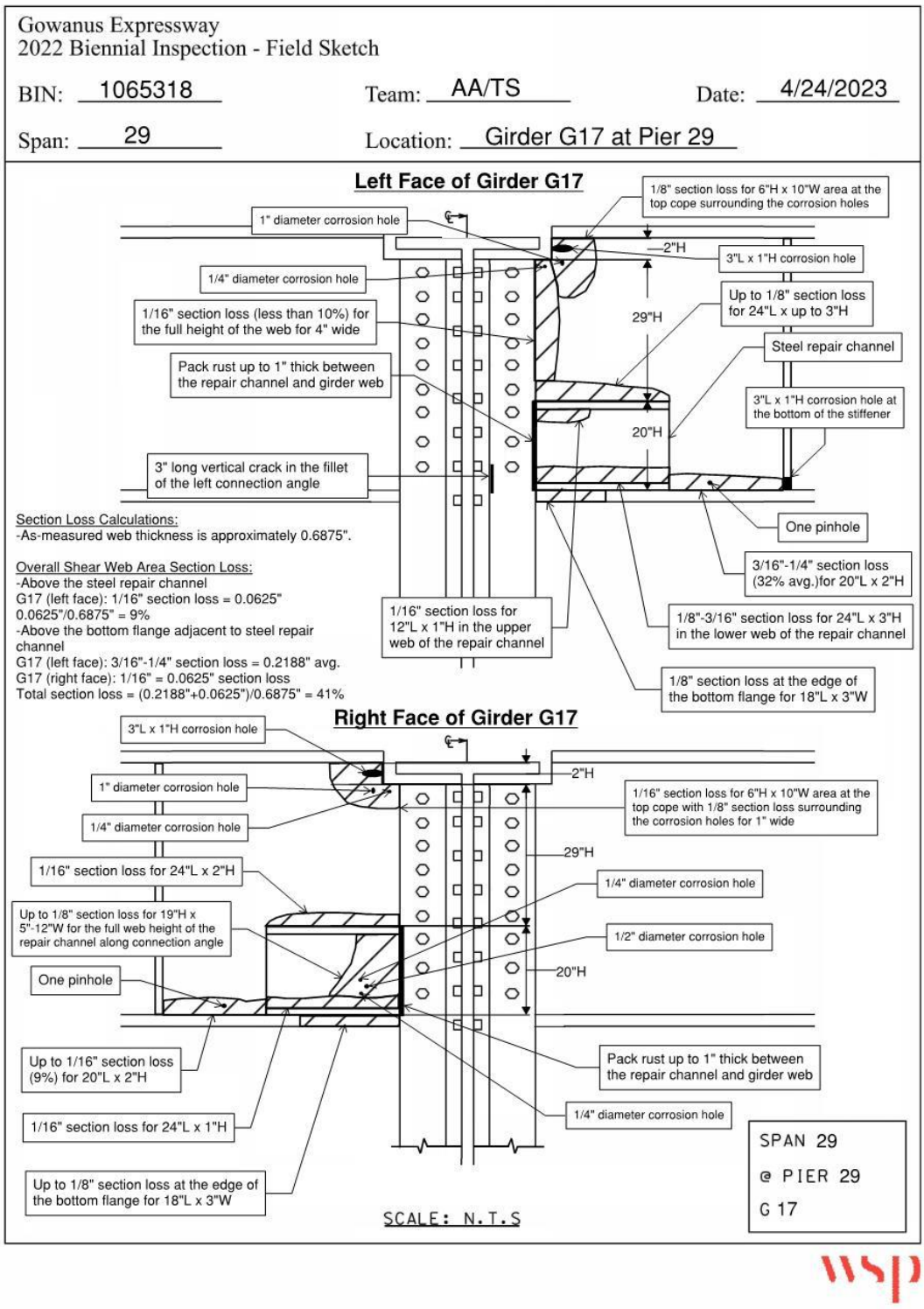
BIN: 1065318 Team: AA/TS Date: 04/24/2023

Span: 29 Location: Girder G17 at Pier 29



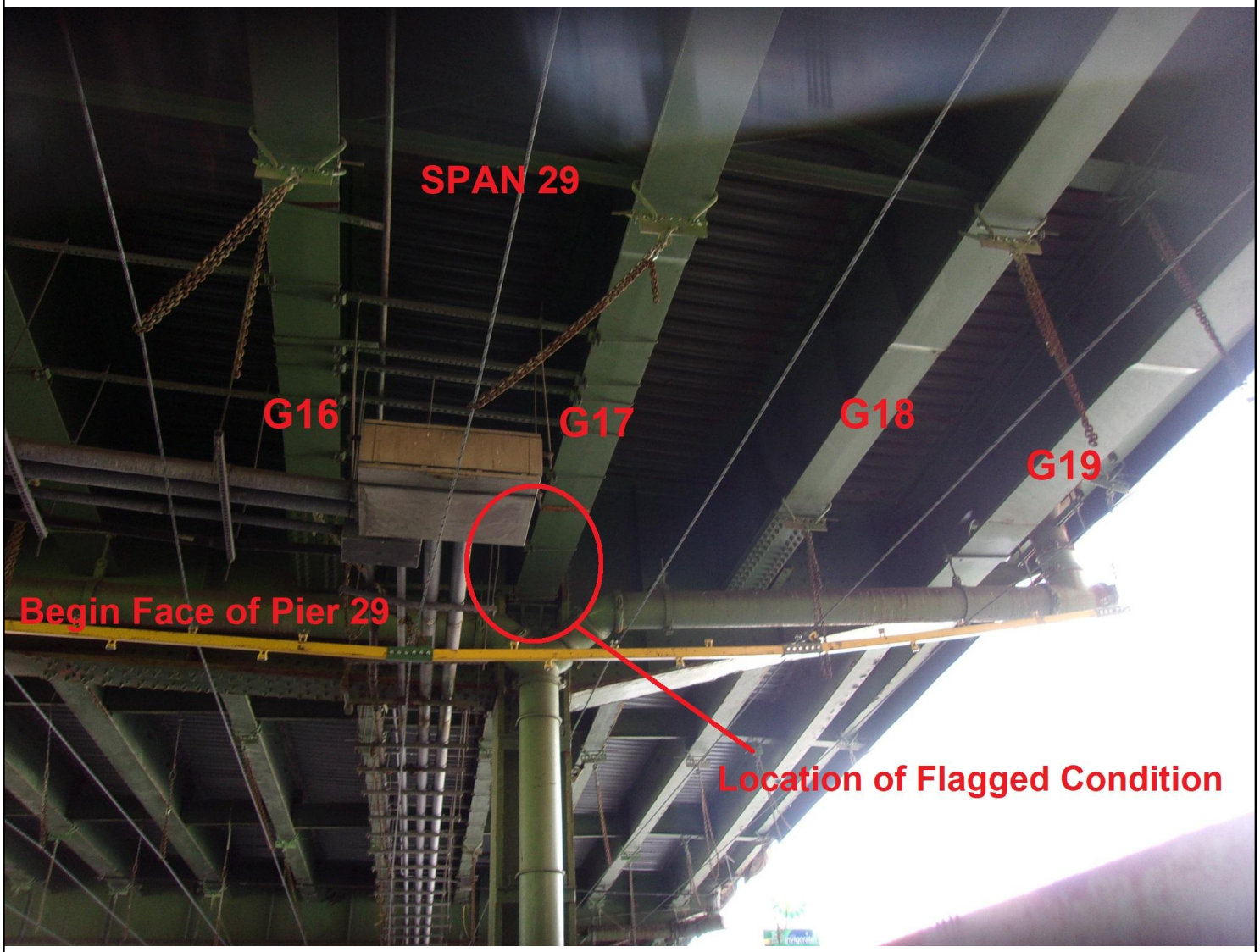
Attachment Description: **Flag Location Plan**

Photo Number: **2** Photo Filename: **23_Span 29_Girder G17_Connection Detail.jpg**



Attachment Description: **Flag Condition Sketch**

Photo Number: **3** Photo Filename: **23_113_6527.JPG**



Attachment Description: **General view of the flagged condition at Girder G17 in Span 29 at Pier 29. Looking End.**

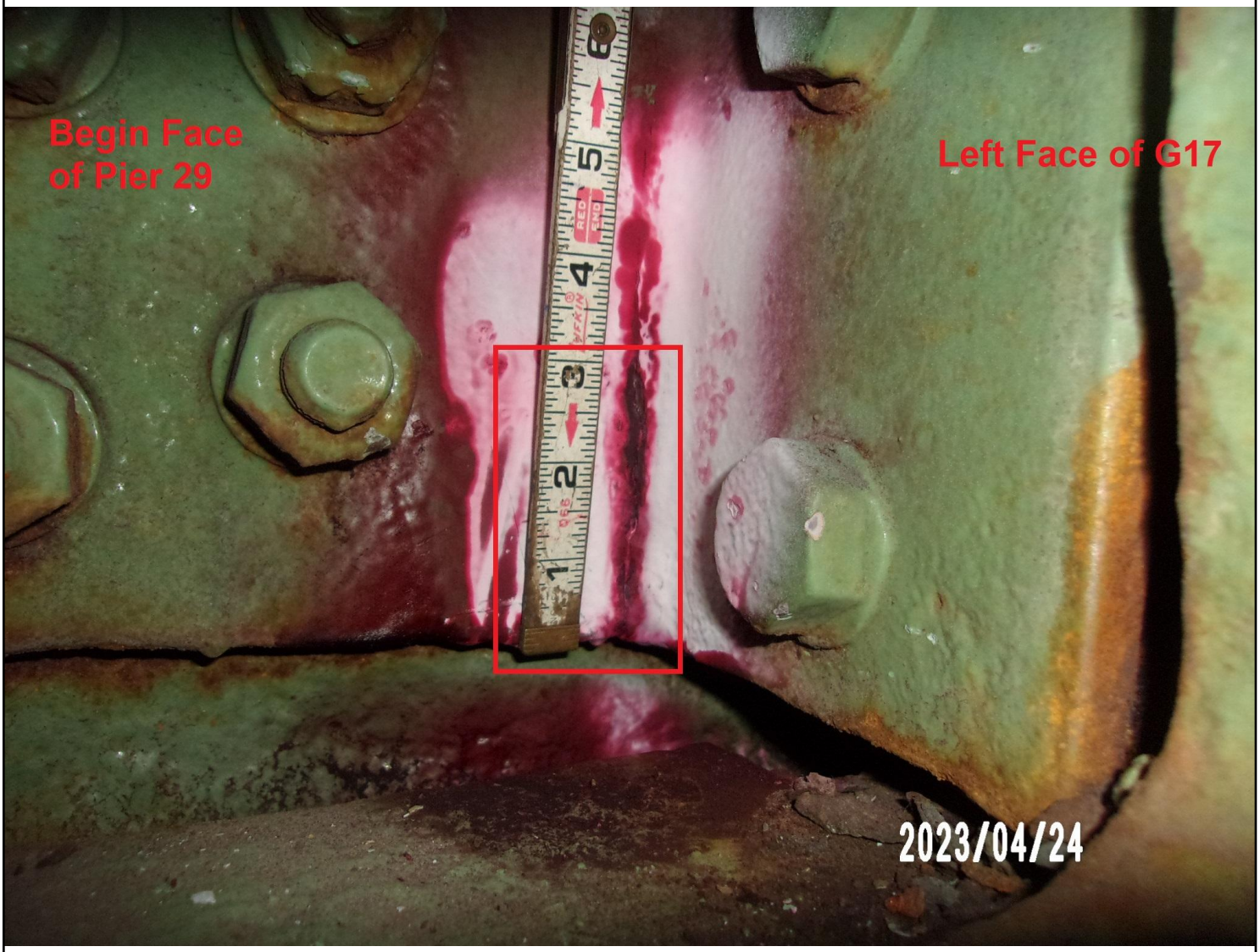
Photo Number: **4** Photo Filename: **23_113_6494.JPG**

Attachment Description: **Close up general view of the left face of Girder G17 in Span 29 at Pier 29. Looking End and Right.**

Photo Number: **5** Photo Filename: **23_113_6497.JPG**

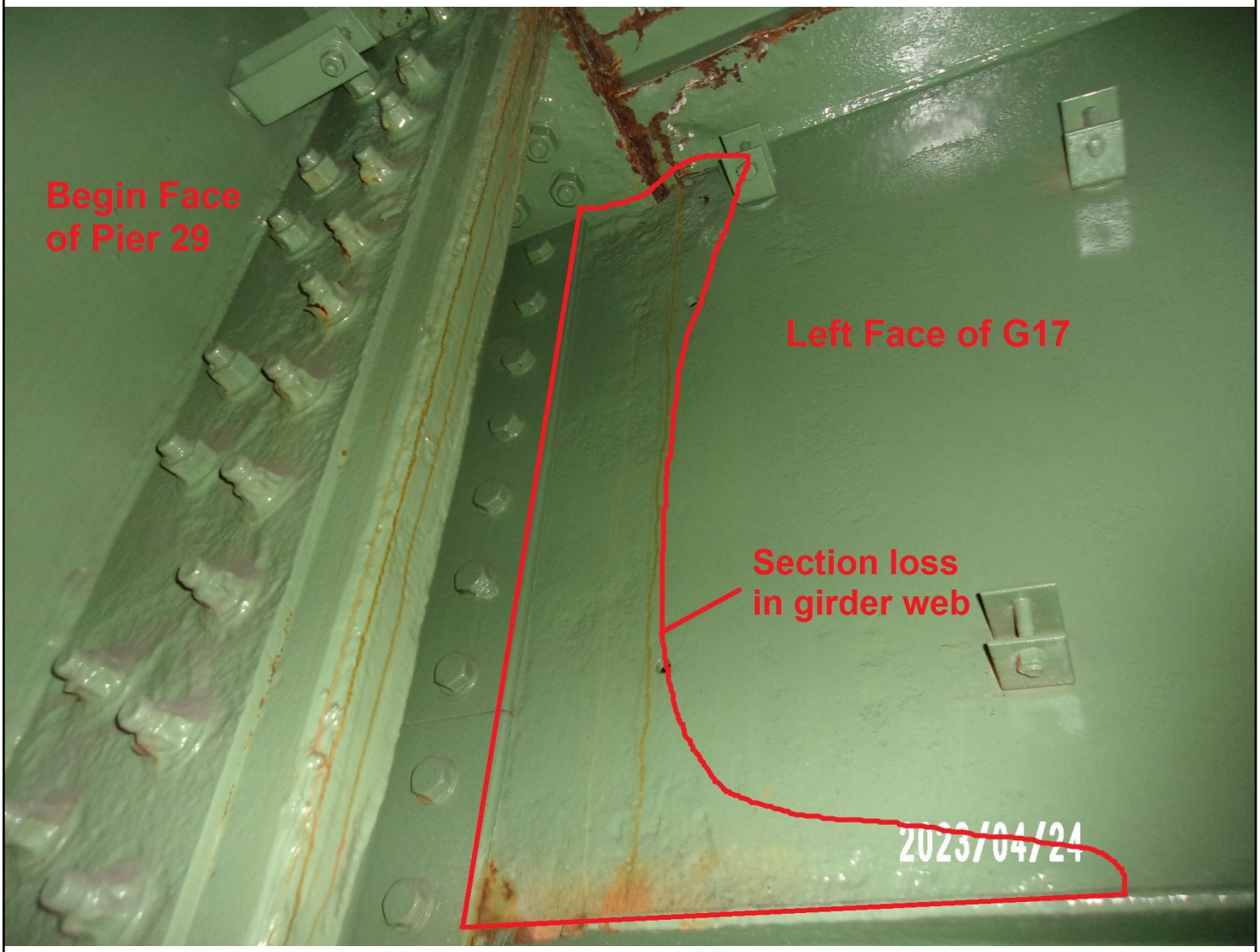
Attachment Description: **The left face of Girder G17 in Span 29 at Pier 29. The bottom of the left connection angle exhibits a 3" long vertical crack in the fillet of the angle (prior to Dye Penetrant test). Looking End and Right.**

Photo Number: **6** Photo Filename: **23_113_6510.JPG**



Attachment Description: **The left face of Girder G17 in Span 29 at Pier 29. The bottom of the left connection angle exhibits a 3" long vertical crack in the fillet of the angle (post Dye Penetrant test). Looking End and Right.**

Photo Number: **7** Photo Filename: **23_113_6496.JPG**

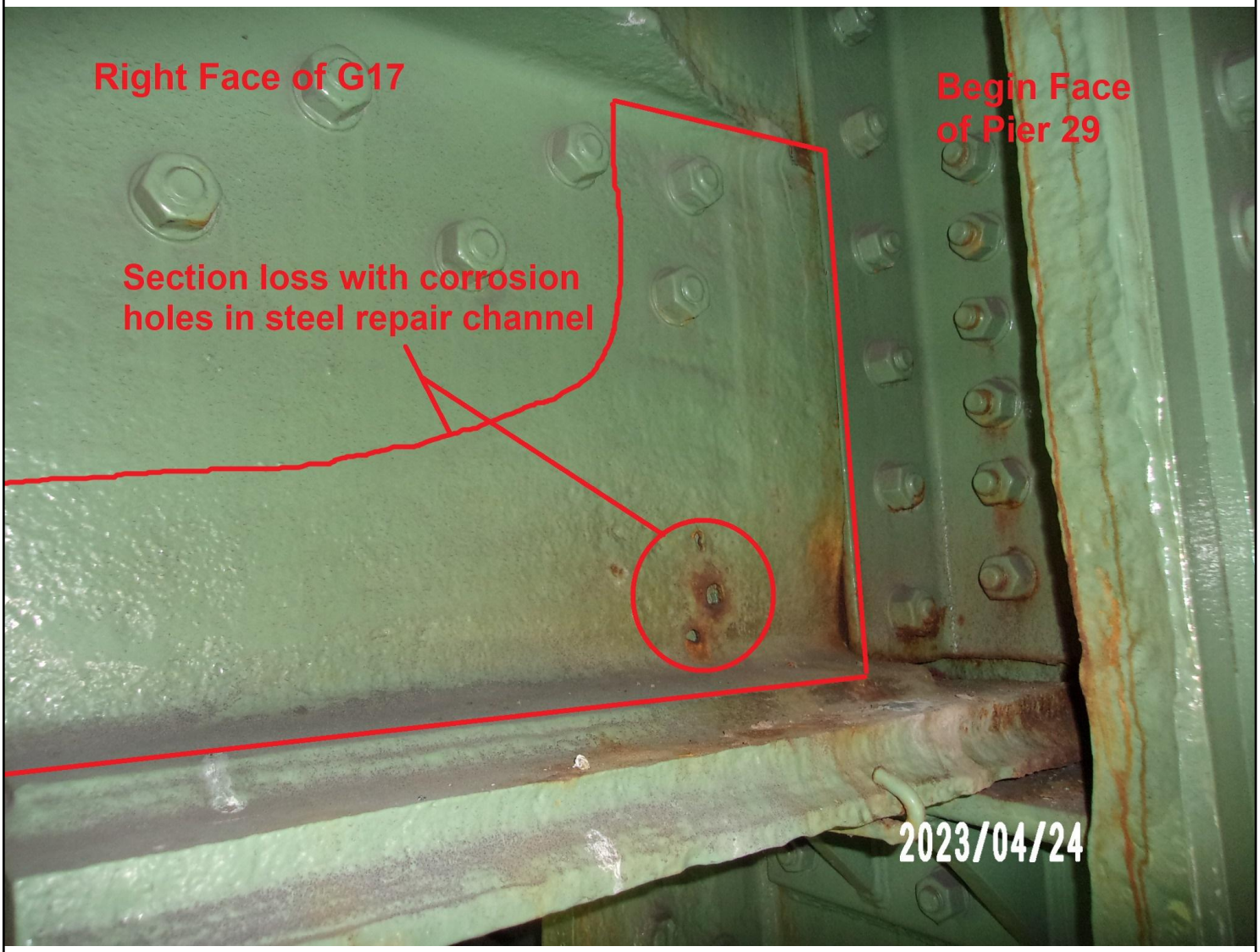


Attachment Description: **The left face of Girder G17 in Span 29 at Pier 29. The girder web above the steel repair channel exhibits section loss (less than 10%) for the full web height along the connection angle. Looking End and Right.**

Photo Number: **8** Photo Filename: **23_113_6498.JPG**

Attachment Description: **The left face of Girder G17 in Span 29 at Pier 29. The steel repair channel and girder area following the repair channel exhibits section loss in the lower web above the bottom flange. The localized loss in the lower web, adjacent to the channel is approx. 41% over an 20" L x 2" H area. Looking End and Right.**

Photo Number: **9** Photo Filename: **23_113_6500.JPG**



Attachment Description: **The right face of Girder G17 in Span 29 at Pier 29. The steel repair channel exhibits section loss with corrosion holes. Looking End and Left.**

Photo Number: **10** Photo Filename: **23_113_6501.JPG**

Attachment Description: **The right face of Girder G17 in Span 29 at Pier 29. The upper web of the girder exhibits section loss with corrosion holes. Looking Left.**